



CRADA Signing Ceremony

In an official ceremony on May 19, 2004, EPA and three private-sector partners, YSI, Inc., PureSense Environmental, Inc., and Hach Company, signed cooperative research and development agreements (CRADAs) to develop early warning detection devices for water distribution systems. Development of technology that can rapidly detect and identify unknown contaminants is critical to safeguarding the drinking water supply, treatment, and distribution infrastructures in U.S. communities. Key research areas are detection and identification of contaminants, response and mitigation, and prevention and protection. "Protection of America's drinking water systems is a critical element of EPA's mission. The agreements we are recognizing here are outstanding examples of how government and indus-

try are working together to find ways to protect our water from contamination," said EPA Acting Deputy Administrator Steve Johnson. "We are excited about the prospect that these partnerships will help water utilities implement effective, new early warning systems for drinking water contamination."

For more information on this and other research conducted by EPA's National Homeland Security Research Center, visit the web site at <http://www.epa.gov/ordnhsrsrc/index.htm>. For specific questions on the research agreements, contact Jonathan Herrmann at herrmann.jonathan@epa.gov. To learn more about CRADAs, visit the web site at <http://www.epa.gov/osp/ftta.htm>, or contact Laurel Schultz at schultz.laurel@epa.gov. ■

ORD and TSC Present at Tribal Caucus Meeting

The March 24, 2004 Tribal Caucus meeting held in Washington, DC, was attended by OSP Director Kevin Teichman representing ORD. The Tribal Caucus, composed of a single tribal representative from each of the nine EPA Regions with federally recognized tribes (with an additional tribal representative designated in Region 10 to represent Alaska Native communities) and a single Agency representative from each Head-

quarters Program Office and Region, met to discuss current environmental science activities and FY 05 tribal budget priorities.

The ORD presentation covered the strategic direction of EPA's science program, ORD's research program, and communication

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A Letter from the Director, Office of Science Policy

The past few months have been very busy for OSP. We held our first public CRADA signing, conducted two regional workshops, completed the preparations for the third annual EPA Science Forum, supported ORD's effort to describe the work required of the new National Program Directors, conducted a workshop with the ORD Program Support Coordinators, managed several BOSC meetings, and many more activities too numerous to mention here. OSP staff continue to take leadership roles in the important work of ORD and the Agency. You can be proud of the positive impact of your excellent work that supports the Agency's mission; I know I am.

Closer to home, the most significant event was the move to consolidate all of OSP headquarters staff on the same floor in the same building for the first time!!! From all reports, the move went smoothly and problems/issues were resolved as quickly as possible. We are still waiting for some reconstruction work to modify several workspaces as well as set up our "mini" conference rooms. I know all of you join me in thanking Anthony Grimm, the "move master," and his SPACE Team for their outstanding work and customer service.

And finally, as you know I will start serving as the Acting Director of NHEERL in July for 3 months. During this time, Jeff Morris will serve as Acting Director of OSP and Connie Bosma will act as the Associate Director for Science. We are working to complete the search for an Acting Program Support Staff Chief at this time. I know I

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NEJAC Meeting on Cumulative Risks and Impacts

On April 13-16, 2004, the National Environmental Justice Advisory Council (NEJAC) Conference was held in New Orleans, LA. The NEJAC is a national advisory committee that provides a forum for public discussion and development of independent advice and counsel to the EPA Administrator, utilizing the respective strengths and responsibilities of community-based groups, industry and business, academic and educational institutions, state and local governments, federally recognized tribes and indigenous groups, nongovernmental and environmental groups, and other stakeholders involved in environmental justice issues.

The focus of the conference was discussion of the draft report produced by a NEJAC workgroup (January 31, 2004), titled "Ensuring Risk Reduction in Com-

munities with Multiple Stressors: Environmental Justice and Cumulative Risks/Impacts." The report addresses the following question: "In order to ensure environmental justice for all communities and tribes, what short-term and long-term actions should EPA take in proactively implementing the concepts contained in its Framework for Cumulative Risk Assessment?" The report argues that combining the Agency's new Cumulative Risk Framework with a collaborative problem-solving approach is the fastest and surest way to bring about tangible and sustainable benefits for disproportionately impacted communities and tribes.

The framework is important because, for the first time, it opens the scope of risk assessment to include the environmental, health, social, and cultural factors that are

key to understanding community risk. Within this framework, the community can enter into a dialogue about risk that realistically incorporates the factors experienced by disadvantaged, underserved, and environmentally overburdened communities and tribes. A collaborative, problem-solving approach is outlined based on the National Institute of Environmental Health Sciences (NIEHS) model of community-based participatory research as "a methodology that promotes active community involvement in the processes that shape research and intervention strategies, as well as the conduct of research studies." The report concludes that community-based participatory research can be an extremely useful tool not only to obtain

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ORD/OPPTS Seminar Series

March 17, 2004—Developing Relative Potency Factors for Pesticide Mixtures: Biostatistical Analyses of Joint Dose-Response

Presenter: Linda K. Teuschler, National Center for Environmental Assessment (NCEA), ORD

Authors: NCEA: Linda K. Teuschler, Glenn E. Rice, John C. Lipscomb; National Homeland Security Research Center: Richard C. Hertzberg; Office of Pesticide Programs: Karen Hamernik, Alberto Protzel; U.S. Food and Drug Administration's National Center for Toxicological Research, Division of Biometry and Risk Assessment: James Chen, Yi-Ju Chen, Ralph L. Kodell

In 1996, the Food Quality Protection Act (FQPA) and Safe Drinking Water Act Amendments (SDWAA) were passed by Congress, each requiring EPA to consider evaluating chemical mixtures. Under the

FQPA, the Office of Pesticide Programs (OPP) assessed 24 organophosphorus pesticides using a Relative Potency Factor (RPF) approach. Subsequently, this new research was conducted to further develop biological concepts and statistical procedures to improve future applications of the RPF approach in response to the need for mixtures research on current (and potential) chemicals on the Office of Water's Contaminant Candidate List (CCL) and under FQPA (e.g., triazinines, carbamates) or for drinking water mixtures of disinfection byproducts or CCL contaminants (e.g., the organotins). The RPF approach is a general methodology for applying dose addition to mixtures of chemicals that produce toxicity by the same toxic mode of action (MOA). It is similar to the Toxicity Equivalence Factor (TEF) method used for dioxins, but requires a less strict interpretation of the toxicity data. Thus, it is applicable to more chemical classes than the TEF method.

This research explores the basic tenets of dose addition (i.e., common toxic MOA and similarly-shaped dose-response curves among the mixture components) and develops mixture risk assessment methods for application when these basic tenets are not met.

Alternatives are provided to evaluate a mixture under three scenarios of varying degrees of uncertainty.

- In the simple case, a common toxic MOA is operating, so dose addition is applied.
- In the second case, more than one MOA is operating, so the mixture components are divided into independent MOA subclasses; the risk assessment approach is to integrate dose addition with response addition.

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Tribal Caucus

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and outreach activities with tribes. Under the new Agency strategic plan, each goal contains a science and research objective and cross-goal Science Strategy that addresses tribal issues that will be integrated into ORD Laboratory and Center research activities across the risk assessment paradigm, including sustainability, Environmental Monitoring and Assessment Program (EMAP), fellowships, Exposure Factors Handbook Program, and grants. In addition, ORD has been involved in numerous communication efforts, particularly the development of a cross-Agency web site on science issues of interest to tribes and information on tribal traditional knowledge. The web site also will provide a sign-up form for individuals who wish to receive periodic e-mails with information on scientific funding, events, and news of interest to tribes.

At ORD's invitation, the National EPA-Tribal Science Council (TSC), represented by Dennis O'Connor (OAR), Agency TSC co-chair, presented a brief description of how

the TSC operates, the connection between the TSC and Tribal Caucus, the accomplishments of the TSC, upcoming plans for the TSC, and current issues of interest to the TSC.

The TSC is a collaborative effort between EPA and tribes, as well as between Program Offices and Regions, which is "tribally-driven" by national science priorities identified by tribes across the country. In addition to research, the TSC discusses a broad range of science issues, and its activities have focused on the science issues of importance to tribes including hosting several workshops (e.g., EDCs, Risk Assessment, Health and Well Being), participating in conferences (e.g., EPA Science Forum, National Tribal Conference), developing Quality Assurance Project Plan (QAPjP) training materials, and communicating with the Science Advisory Board (SAB).

The Tribal Caucus was very pleased with the information provided in the presentations and the work that ORD as well as the TSC is doing to address scientific issues of

importance to tribes. The Tribes were excited about the recent award of the "Lifestyle and Cultural Practices of Tribal Populations and Risks from Toxic Substances in the Environment" grant to five tribal partnerships as a result of a Request for Application (RFA) developed in response to the tribal TSC representatives.

The TSC hopes to host a planning meeting on June 29-30 at Fon du Lac Band of Lake Superior Chippewa reservation in Carlton, MN, to design a workshop on risk assessment and Health and Well Being paradigm issues. This workshop probably will be held in the fall/winter 2004. The group also discussed developing a short-term Action Plan covering a 6-9 month period and enhancing communication between the TSC and tribes.

For more information, please contact Claudia Walters at 202-564-6762 or walters.claudia@epa.gov or you can visit the EPA-Tribal Science Council web site at <http://www.epa.gov/osp/tribes/tribal/index.htm>. ■

Coal and Combustion Byproducts Study With the National Academy of Sciences

In the FY 04 Consolidated Appropriations Act, Congress directed EPA to contract with the National Academy of Sciences (NAS) to begin a study of the health, safety, and environmental risk of coal combustion wastes used for reclamation in active and abandoned mines. ORD will be responsible for leading this study with NAS, and a cross-Agency work group, chaired by Ken

Sala, has been formed. The workgroup includes members from ORD, the Office of Solid Waste, and the Office of Water. The Department of the Interior's Office of Surface Mining will monitor the NAS study.

For more information on this NAS study, please contact Ken Sala at 202-564-1567 or sala.ken@epa.gov. ■

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can count on all of you to give your full support to the OSP management team while I am away. All of you should feel free

to stop by to visit if you are in RTP over the summer months.

NEJAC

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valuable information for cumulative risk/ impact assessments, but also to empower the affected community and to engender more effective prevention/ intervention efforts. Based on discussions at the meeting and feedback from the public, the report will be finalized for submission to the EPA Administrator.

For more information, please contact Richard Garnas at 202-564-6785 or richard@epa.gov. Additional information regarding NEJAC is available at EPA's Office of Environmental Justice web site, <http://www.epa.gov/compliance/environmentaljustice/index.html>. ■

Region/ORD Science Topic Workshops

In the past 3 months, OSP sponsored two Regional Science Topic Workshops. The first, the Region/ORD Science Topic Workshop on Making the Linkages Through the Use of Environmental Indicators, occurred on May 17-20, 2004. The second, the Region/ORD Science Topic Workshop, Science to Action: Community-based Participatory Research and Cumulative Risk Analysis as Tools to Advance Environmental Justice in Urban, Suburban and Rural Communities, occurred on May 25-26, 2004. Some highlights of these two workshops are described below.

The Region/ORD Science Topic Workshop, Making the Linkages Through the Use of Environmental Indicators, was hosted by Region 7 (Kansas City). There were 140 registered participants including representatives from ORD and Regional staff, tribes, states, and nonprofit organizations. By providing this "real life" context to the applications and barriers to the use of environmental indicators, EPA participants developed some new insights to key issues regarding indicator development and the potential contributions of indicators to environmental decision making.

The first day's plenary session provided the background important to understanding the presentations and discussions in the two concurrent tracks that followed. In addition, an indicator training course was offered in two segments during breakfast on two consecutive mornings. Interactive discussion and debate focused on answering key questions about the development and uses of environmental indicators, such as:

- What analytical tools and models are available to help develop indicators?

- How do we utilize indicators at different scales?
- What indicators can be used at the watershed level to measure the success or failure of "landscape" best management practices?
- How can we use existing performance measures to convey environmental accountability?
- How can social indicators be used for environmental decision making?

The workshop concluded with a discussion of recommendations for next steps, including the need for:

- Comparable data sets;
- More research on how to measure sociology/people behavior change;
- A database/web site with case studies illustrating how indicators have been/can be used in environmental decision making;
- Efforts to better integrate the use of indicators into EPA programmatic environmental assessment, management, and enforcement actions;
- A catalog of experts on developing indicators; and
- Efforts to use indicators to break down the silos within EPA.

For further information about the workshop contact Brenda Groskinsky at 913-551-7188 or groskinsky.brenda@epa.gov. For information about other workshops in the Region/ORD Science Topic Workshop Series contact David Klauder at 202-564-6496 or klauder.david@epa.gov.

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Seminar Series

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- In the third case, MOA is uncertain, so a joint dose-response model is used to create a range of risk estimates.

Additionally, two dose response algorithms are provided to group chemicals into MOA subclasses based on a common slope parameter, and a conceptual approach is shown for estimating a mixtures Reference Dose. These results enrich the available library of mixture risk assessment methods beyond current EPA guidance.

The presentation is available at <http://intranet.ord.epa.gov:9876/development/RCT/PestToxRCT.nsf/1d97341def1e57d185256a5c006ee712/482f2db0464aba8785256e6900453048?OpenDocument>.

April 7, 2004—Summary of Draft Probabilistic Exposure Assessment for Children Who Contact CCA-Treated Playsets and Decks Using the Stochastic Human Exposure and Dose Simulation (SHEDS) Model for the Wood Preservative Exposure Scenario

Presenters: Dr. Valerie Zartarian and Dr. Haluk Özkaynak, National Exposure Research Laboratory (NERL), ORD

EPA has conducted a probabilistic exposure and dose assessment on the arsenic (As) and chromium (Cr) components of Chromated Copper Arsenate (CCA) using the Stochastic Human Exposure and Dose Simulation model for wood preservatives (SHEDS-Wood). As part of the Agency's health risk assessment for children who frequently contact CCA-treated wood in playsets and home decks and CCA-contaminated soil around these structures, a draft assessment was presented to OPP's Scientific Advisory Panel in December 2003, and currently is being

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March '04 thru May '04

Welcome to new HSTLs for Regions 5, 6, and 8

Charles Maurice joined the Hazardous Substances Technical Liaison (HSTL) Program on the Cross Program Staff on April 19, and is serving as the Region 5 HSTL in Chicago, IL. Charles has a Ph.D. in Plant Biology from the University of Illinois at Urbana, and an M.S. in Biology from Bowling Green State University. He comes to OSP from Region 5's Office of Strategic Environmental Analysis where he served as an ecologist and ecological risk assessor providing ecological risk assessment assistance concerning high profile sites to Region 5 Superfund, RCRA, and Water Programs; advising Region 5 senior management on high profile ecological issues such as malformed frogs; evaluating ecological quality of ecosystems; and conducting landscape level ecological analyses. Dr. Maurice also was involved in goal setting and work plan development.

Terry Burton joined the HSTL Program on the Cross Program Staff on June 1, and is serving as the Region 6 HSTL in Dallas, TX. Terry has an M.S. in Environ-

mental Engineering from the University of California Berkeley, and an M.S. in Environmental Studies from the University of Massachusetts Lowell. He comes to OSP from Region 9 where he served as a Remedial Project Manager/Environmental Engineer managing remedial projects at complex Superfund sites. He managed and provided oversight of federal and state agencies involved in the performance of remedial project activities; coordinated with national laboratories and research universities on current and potential technologies; and provided technical assistance on environmental engineering, transport, and modeling issues to other projects.

Brian Caruso joined the HSTL Program on the Cross Program Staff on May 17, and is serving as the Region 8 HSTL in Denver, CO. Brian has a Ph.D. in Environmental Engineering/Hydrology from Colorado State University, and an M.S. in Environmental and Water Resources Engineering from the University of Colorado. He comes to OSP from private industry and brings diverse government, research, teaching, and consulting experience in environmental science, planning, engineering/design, and management. His work has included

investigation and remediation of hazardous and solid waste sites, and mining, industrial, municipal/urban, agricultural, and restoration projects, as well as regional environmental programs.

Details/Training Assignments/Students/Internships

Mandy Techau joined OSP's Cross Program Staff on May 24. She is in EPA's Intern Program, Region 7, and is serving on a Rotational Assignment with OSP through July 26. During this rotational assignment with the Cross Program Staff, Mandy is working on activities contributing to regional science and communications programs.

Bryan Groves joined OSP's Cross Program Staff on June 1. He is serving under the Student Temporary Employment Program for the summer assisting with staff operations and data entry.

Brenda Groskinsky, the Regional Science Liaison for Region 7, joined OSP on June 1, and she will be serving on a Rotational Assignment with OSP through August 21. During this rotational

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Jeff Morris Honored With Arthur S. Flemming Award

ORD's Jeff Morris was one of 12 recipients of the 55th annual Arthur S. Flemming Award, which honors outstanding federal employees from all areas of government. Nominees may include any career federal employee who has a minimum of 3 but no more than 15 years of government service. In 13 years, Jeff Morris has advanced within

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OSP Staff Publications

Neil Stiber of OSP's Cross Program Staff has published a paper entitled "Embedding Expert Knowledge in a Decision Model: Evaluating Natural Attenuation at TCE Sites," in the *Journal of Hazardous Materials* (July 2004). The paper describes a generalized methodology that enables the translation of expert knowledge about any complex process involved in a remedial decision into easy-to-use decision tools. The methodology is applied to evaluate reductive dechlorination as a remedial possibility at sites

contaminated with trichloroethene (TCE), building on an existing protocol/scoring system put forth by the U.S. Air Force and the U.S. EPA.

The paper is available online at http://www.elsevier.com/wps/find/journaldescription.cws_home/502691/description#description.

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Details

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assignment, Brenda is serving as a staff assistant to the Director, as well as providing support to both Associate Directors; providing support to ORD's communication office providing strategic ideas and assistance for the provision of science to the Regions; and providing support to ORD workgroups, programmatic offices, sustainability program, and the Immediate Office of the Assistant Administrator, ORD as needs are identified.

Monica Rodia is serving on a detail assignment to the Office of Solid Waste and Emergency Response in the Innovation, Partnerships and Communications Office through July 9.

Jaelyn (Jackie) Johnson joined the Cross Program Staff on June 7. She is an Intern through a cooperative agreement with EPA and the Washington Internship for Native Students administered through American University. Jackie is from the Salish and Kootenai tribe in Montana and is serving an 8-week training internship working on

the development of the Health and Well Being paradigm through July 30.

Intra-OSP Staff Moves

Mojgan (Maggie) Javdan competed for and has been selected to serve, in a 1-year temporary promotion, as the Water Research Coordinator on the Research Coordination Staff. Maggie has been serving as the Acting Water Research Coordinator since December 28. Congratulations Maggie!

Lawrence Martin competed for and has been selected to serve, in a 1-year temporary promotion, as the Air Research Coordinator on the Research Coordination Staff. Lawrence has been serving as the Acting Air Research Coordinator since December 28. Congratulations Lawrence!

Ken Sala has transferred from the Cross Program Staff to the Research Coordination Staff to work on waste program research coordination and planning. Ken previously worked on

waste research program and planning issues prior to his ORD career. He will focus on mine waste research issues as part of his new responsibilities.

Congratulations to Award Recipients!

Congratulations to **Paul Zielinski** and **Mimi Dannel** who received Silver Medals for their contributions to developing the "2003-2008 EPA Strategic Plan" and advancing results-based management in the Agency.

Congratulations to **Sarah Bauer** who received a Customer Service Peer Recognition Award on May 12 from the Office of Resources Management and Administration for delivering quality customer service.

Congratulations on the New Baby!

Congratulations and best wishes to **Heather Drumm** and her husband Dustin on the birth of their daughter, Riley Faye on May 23. Riley was 20 1/2 inches long and 7 lb 13 oz. ■

AED Re-certification Training

The next scheduled re-certification training sessions for use of the Automated External Defibrillator (AED) machines are: July 22, August 26, September 23, October 21, November 18, and December 16. They will be held in EPA East, Room 1203 from 8:30 AM until 12:30 PM. There also will be new responder training (an 8-hour certification class) later this year.

If you are interested in pursuing this training or have any questions, please contact Tangie L. Brown-Cook, OARM/OAS/SHEMD/OB at 202-564-9634. ■

Total Cost of Ownership Update

Concurrent to OSP's consolidation on the 5th floor of the Ronald Reagan Building, new personal computers were installed at 44 workstations. An additional 20 laptop computers are on order and will be distributed to the remaining staff immediately upon their arrival. The new desktop computers are Dell OptiPlex GX270 mini-tower models, with a Pentium® 4 processor operating at 2.80 Ghz, 40 GB hard drive, DVD player, and CDRW, running Windows XP Professional. Two laptop models (Latitude D400T and D800) will be similarly configured, the D400T model

being smaller and lighter weight than the D800.

The new computers include software that recently was purchased through an Agency-wide agreement with Microsoft. The Microsoft Office Suite 2003 is now available to all users from the desktop, including Access, Excel, PowerPoint, Publisher, and Word. Also, the new computers are running Lotus Notes 6.0, an upgrade

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Seminar Series

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finalized. Two bounding estimate climate scenarios, three exposure time periods (short-term, intermediate-term, and lifetime), and four pathways (dermal contact and ingestion of As and Cr in both soil and wood residues) were considered. Variability, sensitivity, and uncertainty analyses were conducted, as well as special analyses considering different subpopulations (e.g., pica children (pica is an eating disorder, occurring for no known reason, in which a person repeatedly eats non-food items, such as clay, dirt, paper, animal feces, paint or hair—usually most common in children with mental retardation and pregnant women)) and exposure reduction scenarios (e.g., sealants, hand washing).

The results from this probabilistic exposure and dose analysis showed that the predicted central values for lifetime annual average daily dose values for arsenic were on the order of 1E-6 to 1E-5 mg/kg/day, with the predicted 95th percentiles on the order of 1E-5 mg/kg/day. There was several orders of magnitude difference between the lower and upper percentiles of predicted population exposure and dose variability estimates, with residue ingestion via hand-to-mouth contact being the most significant exposure route for most scenarios. The key variables that were found to influence model estimates were: wood surface residue-to-skin transfer efficiency, wood surface residue concentrations, fraction of hand surface area mouthed, hand washing events, soil concentrations near treated playsets, daily soil ingestion rate, and time spent on/ around treated residential decks. Alternative scenarios did not significantly impact the baseline results, except for the impact of greatly reducing wood residues through hypothetical wood sealant applications.

Disclaimer: Although this work was reviewed by EPA and approved for publica-

tion, it may not necessarily reflect official Agency policy.

The presentation is available at <http://intranet.ord.epa.gov:9876/development/RCT/PestToxRCT.nsf/1d97341def1e57d185256a5c006ee712/482f2db0464aba8785256e6900453048?OpenDocument>.

May 5, 2004—A GIS Web Mapping Approach for Identifying Species and Locations for Ecological Risk Assessments

Presenters: Dr. Thomas Pflieger, National Health and Environmental Effects Research Laboratory (NHEERL), ORD, and John Gabriel, Alsea Geospatial, Corvallis, OR

To protect human health and the environment from the unintended effects of chemical releases, numerous tests are required in many countries prior to chemical registration. The species used in these tests are quite often familiar to scientists, have an extensive history in a variety of experiments, and are easy to manage. Currently, plant testing in the United States requires the use of 10 recommended test species, all of which are annual, herbaceous crops. However, these species may not be representative of ones that will potentially be exposed and there is little evidence to suggest the species currently used are the most sensitive species to all toxicants. Therefore, these species may not be indicative of the effects that could occur with exposure. The data generated in these tests are used in making ecological risk assessments used by decision makers to decide the regulatory fate of a particular chemical. The uncertainty surrounding the data compels decision makers to make more restrictive choices concerning the level of risk.

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CREM News

An interview with the Agency's Council for Regulatory Environmental Monitoring (CREM) Team Leader, Pasky Pascual, on the Draft Guidance on the Development, Evaluation, and Application of Regulatory Environmental Models appears in the June 2004 issue of WATER 21 (magazine of the International Water Association). The document, produced by the CREM and released earlier this year, highlights the importance of model transparency and was a feature article in the February 2004 OSP Update.

For more information on the CREM and the draft guidance, please contact Pasky Pascual at 202-564-2259 or pascual.pasky@epa.gov or you can visit the CREM web site at: <http://cfpub.epa.gov/crem/whatsnew.cfm>.

To read previous issues of the OSP Update visit <http://epa.gov/osp/recent/0402qrt.pdf>. ■

Total Cost

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featuring a new interface upon log-in that includes a calendar, clock, and calculator.

For more information on the new computers, please contact John Miller at 202-564-1564 or miller.johne@epa.gov. ■

OSP Update Contributing Writers

- Sarah Bauer
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- Claudia Walters
- Ken Sala
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- Pasky Pascual

For more information on the *OSP Update*, contact Susan Peterson at 202-564-1077 or peterson.susan@epa.gov



Workshops

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The Region/ORD Science Topic Workshop, “Science to Action: Community-based Participatory Research and Cumulative Risk Analysis as Tools to Advance Environmental Justice in Urban, Suburban and Rural Communities,” was hosted by EPA New England, in conjunction with Boston University School of Public Health. Scientists, technical experts, community leaders, nonprofit groups, academia, and government representatives were welcomed to this interactive learning forum by Robert Varney, Region 1 Regional Administrator, and Bill Farland, ORD Acting Deputy Assistant Administrator for Science, who identified this conference as one of many workshops to improve understanding of local and national science issues, as well as to explore opportunities to integrate EPA science into decision making in assessing, addressing, and resolving environmental and public health risks in potential environmental justice areas of concern.

Dr. Farland offered the following examples of ORD science for environmental justice:

- **PM Health Studies**—focusing on disproportionate health effects on children and elderly;
- **National Children’s Study**—studying long-term influences on children’s health and development;
- **Border Program**—addressing environmental health concerns to reduce exposure and other factors associated with increase in disease rates along the border; and
- **Tools for Communities**—providing tools such as Framework for Cumulative Risk Assessment, Integrated Exposure Model for Lead, and EPA Science Inventory.

The two major conference themes, “Assessing and Understanding Cumulative Risk in Environmental Justice Communities” and “Community-based Participatory Research in Urban, Suburban and Rural Environmental Justice Communities” were addressed in the plenary fora, with concurrent panel sessions on the topics of Air Toxics, Asthma, Children’s Environmental Health, Land-based Risks, and Water Quality. Participants engaged

in facilitated, small group discussions to identify key research needs and priorities for future action. The conference concluded with all participants gathering to hear brief reports from each topic workgroup, including a summary of panel presentation highlights and key themes that emerged from the small group discussions. Ample opportunity was provided for participant feedback to discuss potential next steps.

Preceding the conference, an afternoon bus tour led by representatives from two local community-based organizations illustrated some of the most pressing environmental justice concerns facing the residents of Chelsea (pop. 35,000) and East Boston (pop. 38,000), MA. With over 50 percent representing people of color and more than 20 percent falling below the poverty level, these residents face lack of open and green space, limited waterfront access, numerous state-designated hazardous waste sites, heavy concentration of industries in a designated port area, heavy traffic, and air pollution.

For more information, please contact Richard Garnas at 202-564-6785 or garnas.richard@epa.gov. ■

Seminar Series

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A more realistic approach would be to use the species most likely to be exposed to the toxicant as the test species. A method has been developed for determining test species for plant tests using a geographic information system (GIS) developed for the conterminous United States, which uses information on crop location, crop diversity, herbicide use rates, and wind speed to determine high-risk areas. Crops, non-cultivated plants and threatened/

endangered species then are identified from those areas using the GIS. These factors can be used to determine relevant species for various exposure scenarios, decreasing the uncertainty associated with ecological risk assessment. The GIS also can be used for other scenarios such as pesticide monitoring sites, native plant populations in proximity to genetically modified relatives, and potential control sites for experimental uses.

Slide Presentation: The presentation is available at <http://intranet.ord.epa.gov:9876/development/RCT/PestToxRCT.nsf/1d97341def1e57d185256a5c006ee712/74681eff6d1fd0ea85256e8400488ed8?OpenDocument>.

For more information about the Seminar Series, please contact Greg Susanke at 202-564-9945 or susanke.greg@epa.gov. ■



Jeff Morris

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the federal government from a GS-7 management analyst at the Department of Education in 1991, to becoming the Associate Director for Science of the Office of Science Policy in 2003.

Under Jeff's management and leadership in OSP, direct scientific support to EPA's Regional Offices has more than doubled. In addition, Jeff led the development of the EPA Science Inventory, has overseen the implementation of EPA's policy on scientific peer review, and has played a key role in strengthening the use of science in Agency decision making.

While working for EPA's OPP in the 1990s, Jeff successfully negotiated with pesticide manufacturers to add protections for agricultural workers from exposure to organophosphate insecticides. Just 2 years later, Jeff led an EPA team that negotiated the cancellation of pesticide uses that posed potential cancer risks. Jeff also was a Peace Corps volunteer in the Dominican Republic from 1984-1986. Jeff was honored for his accomplishments at a ceremony on June 7 at the George Washington University. ■

Publications

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Click "Access full text articles" from right hand column, select the July 2004 issue and scroll to the article.

Tim Benner of OSP's Program Support Staff has published a paper in *Environmental Science and Technology* comparing EPA's ambient air quality standards, drinking water regulations, and IRIS health assessments to those of other agencies and other countries. The paper, entitled "Brief Survey of EPA Standard-Setting and Health Assessment," considered hundreds of standards and reference values, concluding that the EPA values are not out of line with those derived elsewhere. The results contradict the frequent complaints of widespread EPA conservatism that prompted the project.

The paper will appear in print in an upcoming issue of the journal and is available online at <http://pubs.acs.org/cgi-bin/asap.cgi/esthag/asap/pdf/es035132h.pdf>.

Elsie Sunderland of OSP's Cross Programs Staff has published a paper in

Marine Chemistry that hypothesizes a new mechanism of methylmercury formation in coastal ecosystems. The paper, entitled "Speciation and Bioavailability of Mercury in Well-Mixed Estuarine Sediments," considered an extensive field data set from the Bay of Fundy region of Canada, including measurements of methylmercury production in coastal sediments using isotopically labeled mercury. The results help to explain why there is a time delay between declines in mercury emissions and concentrations in coastal organisms in physically dynamic systems like the Bay of Fundy. The paper will appear in print in an upcoming issue of the journal *Marine Chemistry*.

The paper is available online at http://www.elsevier.com/wps/find/journaldescription.cws_home/502691/description#description.

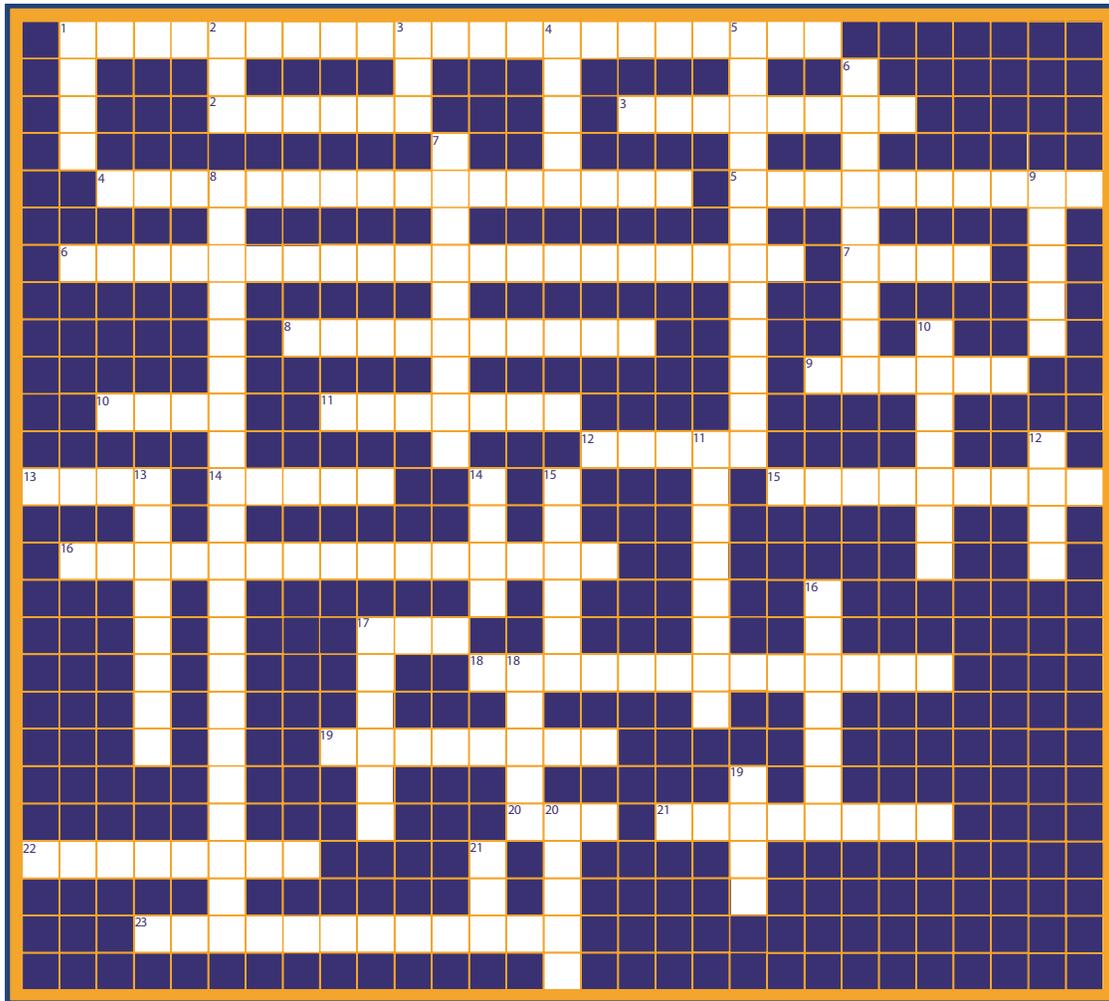
Click "Access full text articles" from right hand column, select the "Journal" tab, and Quick Search for Sunderland within "all full-text sources." ■

Solution to February OSP Update Word Scramble

1. ECCNEIS RENNTYOIV	SCIENCE INVENTORY
2. SDEMLO DWEEKLOGN ASBE	MODELS KNOWLEDGE BASE
3. BAILTR IRA TONNGIORIM TNASOI ECERTN	TRIBAL AIR MONITORING STATION CENTER
4. YHIDROT VEICAT MEALHSCIC	THYROID ACTIVE CHEMICALS
5. BEEXLIFL LATERUNPHOEY AFMO CROPDOTIUN	FLEXIBLE POLYURETHANE FOAM PRODUCTION
6. ASG BERTNIU SINGTEDIL	GASTURBINE
7. FURMO ORF INTENORMAVLEN GOTINNOIMR	FORUM FOR ENVIRONMENTAL MONITORING
8. REPEATVOICO SCREEHRA DNA ELOPEVNTMED	COOPERATIVE RESEARCH AND DEVELOPMENT
9. LATTO SCOT FO POWERHINS	TOTAL COST OF OWNERSHIP
10. UBY CANLE INVITEIIAT	BUY CLEAN INITIATIVE



Crossword



Across

1. An approach for pesticide assessment
2. One of the metals used in treating lumber
3. The degree to which something is poisonous
4. NHSRC's focus
5. Risk _____
6. Topic of the 16th Region/ORD Science Topic Workshop
7. Legislation enforced by EPA
8. Biomarkers
9. A disease on the rise in children
10. Requires regulation of pesticides used on foods
11. Studying health, safety, and environmental risk of coal combustion
12. Integrated Exposure Model for lead is one
13. A federal advisory board to ORD

14. Developed model for community-based participatory research
15. Dose simulation model for wood preservatives
16. Board that provides advice to EPA
17. Office of Water's list
18. Used to extract coal
19. Area surrounding a city
20. One of the National Institutes
21. A metal used in wood preservation
22. Award received by Jeff Morris
23. A band of Lake Superior Chippewa tribe

Down

1. It's relative
2. Dennis O'Connor is its co-chair
3. One of EPA's Offices
4. _____ Skies
5. Met in Washington on March 24

6. Environmental _____
7. DDT is one
8. Focus of the new CRADA signed May 19
9. A federal advisory committee
10. A Massachusetts city with environmental justice concerns
11. Can be accomplished using environmental indicators
12. Used to generate electricity
13. Reservation in Carlton, MN
14. _____ Response
15. Boundary
16. The new computer processors
17. The new HSTL in Region 8
18. City
19. Target of pesticide application
20. Mechanism to collaborate with industry
21. Mode of action